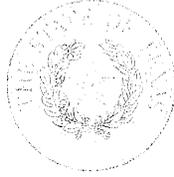


Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 9, 2009

TO: Persons on the attached mailing list.

RE: Cottonwood Auction Barn, L.L.C.
TPDES Permit No. WQ0004136000

Decision of the Executive Director.

The executive director has made a decision that the above-referenced permit application meets the requirements of applicable law. **This decision does not authorize construction or operation of any proposed facilities.** Unless a timely request for contested case hearing or reconsideration is received (see below), the TCEQ executive director will act on the application and issue the permit.

Enclosed with this letter is a copy of the Executive Director's Response to Comments. A copy of the complete application, draft permit and related documents, including public comments, is available for review at the TCEQ Central office. A copy of the complete application, the draft permit, and executive director's preliminary decision are available for viewing and copying at the Earth County Courthouse, Annex Room 109, 112 West College Street, Stephenville, Texas.

If you disagree with the executive director's decision, and you believe you are an "affected person" as defined below, you may request a contested case hearing. In addition, anyone may request reconsideration of the executive director's decision. A brief description of the procedures for these two requests follows.

How To Request a Contested Case Hearing.

It is important that your request include all the information that supports your right to a contested case hearing. You must demonstrate that you meet the applicable legal requirements to have your hearing request granted. The commission's consideration of your request will be based on the information you provide.

The request must include the following:

- (1) Your name, address, daytime telephone number, and, if possible, a fax number.
- (2) If the request is made by a group or association, the request must identify:
 - (A) one person by name, address, daytime telephone number, and, if possible, the fax number, of the person who will be responsible for receiving all communications and documents for the group; and
 - (B) one or more members of the group that would otherwise have standing to request a hearing in their own right. The interests the group seeks to protect must relate to the organization's purpose. Neither the claim asserted nor the relief requested must require the participation of the individual members in the case.
- (3) The name of the applicant, the permit number and other numbers listed above so that your request may be processed properly.
- (4) A statement clearly expressing that you are requesting a contested case hearing. For example, the following statement would be sufficient: "I request a contested case hearing."

Your request must demonstrate that you are an **"affected person."** An affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. Your request must describe how and why you would be adversely affected by the proposed facility or activity in a manner not common to the general public. For example, to the extent your request is based on these concerns, you should describe the likely impact on your health, safety, or uses of your property which may be adversely affected by the proposed facility or activities. To demonstrate that you have a personal justiciable interest, you must state, as specifically as you are able, your location and the distance between your location and the proposed facility or activities.

Your request must raise disputed issues of fact that are relevant and material to the commission's decision on this application. The request must be based on issues that were raised during the comment period. The request cannot be based solely on issues raised in comments that have been withdrawn. The enclosed Response to Comments will allow you to determine the issues that were raised during the comment period and whether all comments raising an issue have been withdrawn. The public comments filed for this application are available for review and copying at the Chief Clerk's office at the address below.

To facilitate the commission's determination of the number and scope of issues to be referred to hearing, you should: 1) specify any of the executive director's responses to comments that you dispute; and 2) the factual basis of the dispute. In addition, you should list, to the extent possible, any disputed issues of law or policy.

How To Request Reconsideration of the Executive Director's Decision.

Unlike a request for a contested case hearing, anyone may request reconsideration of the executive director's decision. A request for reconsideration should contain your name, address, daytime phone number, and, if possible, your fax number. The request must state that you are requesting reconsideration of the executive director's decision, and must explain why you believe the decision should be reconsidered.

Deadline for Submitting Requests.

A request for a contested case hearing or reconsideration of the executive director's decision must be **received** by the Chief Clerk's office no later than **30 calendar days** after the date of this letter. You may submit your request electronically at <http://www.tceq.state.tx.us/about/comments.html> or by mail to the following address:

LaDonna Castañuela, Chief Clerk
TCEQ, MC-105
P.O. Box 13087
Austin, Texas 78711-3087

Processing of Requests.

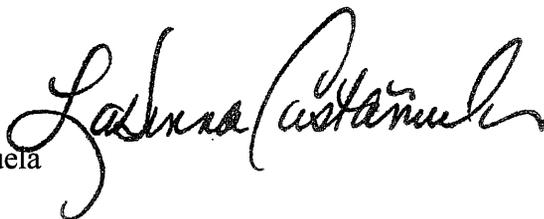
Timely requests for a contested case hearing or for reconsideration of the executive director's decision will be referred to the alternative dispute resolution director and set on the agenda of one of the commission's regularly scheduled meetings. Additional instructions explaining these procedures will be sent to the attached mailing list when this meeting has been scheduled.

How to Obtain Additional Information.

If you have any questions or need additional information about the procedures described in this letter, please call the Office of Public Assistance, Toll Free, at 1-800-687-4040.

Sincerely,

LaDonna Castañuela
Chief Clerk



LDC/lg

Enclosures

MAILING LIST
For
Cottonwood Auction Barn, L.L.C.
TPDES Permit No. WQ0004136000

FOR THE APPLICANT:

Larry Gibson
Cottonwood Auction Barn, L.L.C.
9862 East State Highway 6
Dublin, Texas 76446

Michael Martin
Stephenville Office
580-D West Lingleville Road
Stephenville, Texas 76401

J. Claire Baker
Lowther Consulting, Inc.
P.O. Box 78
Dublin, Texas 76446

FOR THE EXECUTIVE DIRECTOR
via electronic mail:

Alicia M. Lee, Staff Attorney
Texas Commission on Environmental Quality
Environmental Law Division MC-173
P.O. Box 13087
Austin, Texas 78711-3087

Jamie Saladiner, Technical Staff
Texas Commission on Environmental Quality
Water Quality Division MC-148
P.O. Box 13087
Austin, Texas 78711-3087

FOR OFFICE OF PUBLIC ASSISTANCE
via electronic mail:

Bridget Bohac, Director
Texas Commission on Environmental Quality
Office of Public Assistance MC-108
P.O. Box 13087
Austin, Texas 78711-3087

FOR PUBLIC INTEREST COUNSEL
via electronic mail:

Blas J. Coy, Jr., Attorney
Texas Commission on Environmental Quality
Public Interest Counsel MC-103
P.O. Box 13087
Austin, Texas 78711-3087

FOR THE CHIEF CLERK
via electronic mail:

LaDonna Castañuela
Texas Commission on Environmental Quality
Office of Chief Clerk MC-105
P.O. Box 13087
Austin, Texas 78711-3087

PROTESTANTS/INTERESTED PERSONS:

See attached list.

ERIC ALLMON
LOWERRE FREDERICK PERALES ALLMON &
STE 200
707 RIO GRANDE ST
AUSTIN TX 78701

THOMAS J CLOUD JR FIELD SUPERVISOR
US FISH AND WILDLIFE SERVICE
STE 252
711 STADIUM DR
ARLINGTON TX 76011-6247

MARTIN C ROCHELLE ATTORNEY
LLOYD GOSSELINK BLEVINS ROCHELLE & T
STE 1900
816 CONGRESS AVE
AUSTIN TX 78701-2442

TPDES PERMIT NO. WQ0004136000

APPLICATION BY
COTTONWOOD AUCTION
BARN, L.L.C.

§
§
§

BEFORE THE TEXAS
COMMISSION ON
ENVIRONMENTAL QUALITY

2009 APR -7 PM 4: 19

CHIEF CLERKS OFFICE

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director (ED) of the Texas Commission on Environmental Quality (the commission or TCEQ) files this Response to Public Comment (Response) on the LCS Corrections Services, Inc. (Applicant) application and Executive Director's preliminary decision. As required by 30 Texas Administrative Code (TAC) (§) Section 55.156, before a permit is issued, the Executive Director prepares a response to all timely, relevant and material, or significant comments. The Office of the Chief Clerk timely received comment letters or comments at the public meeting from the following persons: Lloyd Gosselink on behalf of the City of Waco (City), and Lowerre, Frederick, Perales & Allmon on behalf of Dr. Pritchey Smith. This response addresses all such timely public comments received, whether or not withdrawn. If you need more information about this permit application or the wastewater permitting process, please call the TCEQ Office of Public Assistance at 1-800-687-4040. General information about the TCEQ can be found at our website at www.tceq.state.tx.us.

BACKGROUND

Description of Facility

The Applicant has applied to the TCEQ to renew its Texas Pollutant Discharge Elimination Permit (TPDES) No. WQ0004136000 to authorize the operation of an existing Concentrated Animal Feeding Operation (CAFO) at a maximum capacity of 1,800 head.

The facility is located on the south side of State Highway 6, approximately 4.2 miles east of the intersection of Farm-to-Market Road 219 and State Highway 6 in Dublin, Erath County, Texas. The facility is located in the drainage area of the North Bosque River in Segment No. 1226 of the Brazos River Basin.

Procedural Background

The permit application was received on June 1, 2005 and declared administratively complete on August 5, 2005. The Notice of Receipt and Intent to Obtain a Water Quality Permit was published in *The Stephenville Empire Tribune* on August 9, 2005. The Notice of Application and Preliminary Decision for a Water Quality Permit was published in *The Stephenville Empire Tribune* on August 27, 2008. The public comment period ended on September 26, 2008. This application is subject to House Bill 801, 76th Legislature, 1999.

COMMENTS AND RESPONSES

COMMENT 1:

Dr. Smith is concerned that the Applicant has not met its burden in regards to nuisance odors.

RESPONSE 1:

The draft permit does not provide air authorization. The Applicant must comply with 30 TAC § 106.161, pertaining to Animal Feeding Operations, Permits by Rule, which states that operations have to be designed to feed no more than 1,000 cattle. The Applicant must comply with the air standard permit by rule found in 30 TAC § 321.43, unless an individual air authorization is obtained. Special Provision J is in the draft permit to address this issue.

The permittee cannot exceed 999 total head at any one time until individual air authorization is obtained under 30 TAC 116 because of the occupied residence within the 0.25 mile buffer zone.

COMMENT 2:

Dr. Smith comments that the facility is located in the drainage area of the North Bosque River in Segment 1226 of the Brazos River Basin. He states that this segment has been recognized as out of compliance for state water quality standards regarding algal growth and bacteria. He further states that TCEQ has acknowledged that, "water quality concerns in the North Bosque River watershed are largely associated with animal feeding operations." He finally states that Phosphorus has been identified as the pollutant most directly responsible for algal blooms in this river, and that waste from CAFOs in the watershed is also largely responsible for bacteria problems in the river. Dr. Smith questions whether the proposed permit is consistent with the TMDL I-Plan.

RESPONSE 2:

TCEQ established rules to implement the North Bosque TMDL I-Plan and the draft permit is consistent with those rules. The special rule requirements that pertain to North Bosque dairy CAFOs are found in 30 TAC § 321.42 TCEQ rules and permit requirements are consistent with or more stringent than the federal rules and national guidance. TCEQ has performed TMDL evaluations sufficient to satisfy federal requirements and to justify implementing the new CAFO regulations. The draft permit is consistent with the Bosque TMDL, TMDL I-Plan, and CAFO rules in 30 TAC, Chapter 321. The draft permit for the Applicant was approved by EPA on August 29, 2008.

COMMENT 3:

The City comments that the application fails to properly calculate runoff from the design rainfall event, noting errors in land use condition, antecedent runoff condition, roof acreage, and RCS surface area.

RESPONSE 3:

As noted in the comment letter, the Applicant uses Texas Engineering Technical Note 210-18-TX5 (TX5), which is considered acceptable for calculating runoff. TX5 establishes criteria to evaluate hydrologic conditions. A rating of "Good" is reflective of vegetation covering 75% or

more of the ground surface, a rating of "Fair" is reflective of vegetation covering 50-75% of the ground surface, and a rating of "Poor" is less than 50% of vegetation covering the ground surface. The condition of vegetation is highly variable, based on season and annual rainfall. The application represents the current conditions determined by the engineer's site evaluation and/or the proposed condition that the Applicant intends to maintain during the term of the permit.

TX5 allows the use of the adjusted average condition runoff curve number procedure. The Applicant used a more conservative adjusted average condition runoff curve number equation for the location of the facility than prescribed by TX5. The ED determined that runoff was calculated using NRCS standards, in accordance with the rules.

The use of zero roof area contributing runoff to the RCS is acceptable even with shade areas and other roof areas located within the drainage area. Runoff from these roof areas does not go directly into the RCSs, instead, it runs off of the roof and over the land surface prior to entering the RCS. The roof area is included in the acreage for open lots where a CN of 90 was used. The curve numbers used for these areas are then applied to the roof area. A runoff curve number of 90 is acceptable for open lot surfaces with some roof and concrete areas.

The 2.54 acres in the design calculations for the permit application is derived by actual onsite measurement and correlates to the value represented in the stage storage table in the application. The ED determined that the surface area used in the application is appropriate.

COMMENT 4:

The City comments that the applicant overestimated the acreage of LMU #1 by three acres.

RESPONSE 4:

Technical review of the application using ArcView GIS supports the acreage of LMU #1 found in the application and draft permit.

COMMENT 5:

The City comments that the application fails to provide information on a composting area on page 6 of the Technical Information Packet and therefore, the draft permit in Section VII.A.5 should prohibit the placement of any composting area within the drainage area of the RCS.

RESPONSE 5:

The site map submitted with the permit application identified a compost area between the Auction Barn and State Highway 6. Since composting will be conducted outside of the drainage area, berms must be constructed to contain any runoff. The permit only authorizes discharges from a properly designed, constructed, operated, and maintained RCS in the event of chronic or catastrophic rainfall events, or catastrophic conditions that cause an overflow. Discharges are not authorized under any circumstances from berms surrounding compost areas.

COMMENT 6:

The City comments that the historical waste application fields should be identified in the application or the permit.

RESPONSE 6:

Section VII.A.9(b)(2) of the permit requires the Applicant to have soil samples collected annually for each current and historical LMU. This provision tracks the requirement in 30 TAC § 321.42(k) that historical waste application fields must be sampled every year, regardless of whether the Applicant eliminates them from the permit.

Special Provision X.N. in the permit requires the Applicant to maintain a map in the PPP which identifies the location of all historical LMUs and reads as follows: "A LMU map showing historical LMUs shall be maintained in the PPP." Fields no longer associated with the dairy facility (historical LMUs) may be used as third party fields so long as all third party requirements in TCEQ rules are met.

COMMENT 7:

The City is concerned that the draft permit does not require a stage/storage table to calculate the effect of evaporation on the monthly water balance. The City requests that Section VII.A.5(a)(2)(iv) should be revised as follows: "a stage/storage table for each RCS with minimum depth increments of one foot, including the storage volume and surface area provided at each depth."

RESPONSE 7:

The surface area of a RCS is the factor used in designing the required capacity. The expected evaporation surface area used in the water balance was taken as a percentage of the total top of the berm surface area. Surface area will also be a factor in calculating the volume at each depth increment in the stage/storage table for the RCS management plan. For operational purpose, it is the volume measurement at each depth increment that needs to be known, not the surface area.

COMMENT 8:

The City comments that the draft permit does not require an RCS Management Plan until after the RCS is modified. The City comments that this does not allow for meaningful staff or public review before the plan is implemented. At a minimum, the City recommends revising the draft permit to require the RCS Management Plan to be submitted to TCEQ permitting staff when completed for review and approval. Additionally, the City comments that the draft permit does not appear to require an RCS Management Plan for the existing RCSs before the permit is issued. The City notes that this seems inconsistent with the requirement of 30 TAC § 321.42(g), which requires an RCS Management Plan for all RCSs.

RESPONSE 8:

The CAFO rules at 30 TAC § 321.42(g) and the draft permit require that the Applicant implement an RCS management plan and maintain a copy in the PPP. TCEQ rules do not require review of RCS management plans prior to or after issuing the permit. This requirement is being implemented through issuance of the permit. See 30 TAC § 321.42(a). Until the actual expansion and modification of the RCS is completed and the volume certified, which takes place after the permit is issued, the RCS management plan cannot be completed and implemented.

The purpose of the RCS management plan is to assist the operator with proper management of the RCS system and to provide information for the TCEQ regional inspectors to determine if the

system is being operated in compliance with the permit and the design of the RCS. Submittal of the RCS management plan is not necessary to achieve these purposes.

The draft permit does require an RCS management Plan for all RCSs authorized in the draft permit. The Applicant has 180 days from the date the permit is issued to make RCS modifications.

COMMENT 9:

The City comments the Applicant calculated the sludge accumulation volume from open lot runoff based on 25% of the runoff from the 25-year, 10-day rainfall event and that there is no technical or historical data to justify this value.

RESPONSE 9:

Sludge accumulation volume requirements for sludge accumulation from runoff have been estimated as 25% of the 25-year, 24-hour runoff volume from open lot areas. The draft permit uses the calculated 10-year sludge volume as a 5-year design volume. It also uses the 25-year, 10-day storm event, which further increases the design volume of the RCS. The method used by the Applicant is one of a limited number of methodologies and is considered acceptable for use in Texas.

COMMENT 10:

The City comments that the existing permit issued December 13, 1999 requires an RCS with a capacity of 4.02 acre-feet. The engineering certification dated February 28, 2007 indicated that the capacity is 2.46 acre-feet. The Applicant may be enlarging the RCS, but it may take up to a year to accomplish. The TCEQ should consider requiring in the draft permit that the existing RCS at least meet the current permit requirements until the new RCS is constructed. Otherwise, the Applicant has presented no information demonstrating that the facility will be able to contain runoff from major rainfall events.

RESPONSE 10:

Existing RCS volume requirements are contained in the existing authorization and are enforced under that authorization by TCEQ Field Investigators. If the draft permit is issued, the new 25-year, 10-day volume allocation requirements will take effect and construction will be required to meet those allocations within 180 days. The required minimum volume allocations are shown in Section VII. X.A.1. of the draft permit. Section VII.A.3.(a) of the draft permit requires that after completion, liner and capacity certifications for new construction be maintained in the PPP.

COMMENT 11:

The City comments that the draft permit should be amended to require annual determination of sludge accumulation instead of three years following permit issuance.

RESPONSE 11:

30 TAC § 321.39.c and Section VII.A.4(a)(7) of the draft permit prohibit the Applicant from allowing sludge accumulation to exceed the design volume. This is achieved by removing the sludge according to the design schedule. The design criterion for this dairy is 21 years of accumulation. The RCS management plan will establish accumulation rates in the RCS, which

will identify the current sludge volume in the RCS. Taking volume measurements starting in year three will help reevaluate the accumulation rates prior to reaching the 21-year design volume.

By starting measurements in year three, the operator will have time to complete modification and expansion of RCS; and to develop and implement an RCS management plan to appropriately manage the sludge volume in the ponds. Furthermore, taking daily pond marker readings should assist in determining excessive sludge accumulation in the RCS.

COMMENT 12:

The City comments that the draft permit language for the required RCS capacity certification under provision VII.A.3(a)(2) should make clear that all capacity certifications require certification of both total as-built capacity and the remaining capacity as a result of sludge accumulation. This could be addressed by incorporating the following provision into the terms of the draft permit: "Capacity certifications shall include both the total as-built RCS capacity and the remaining RCS capacity due to sludge accumulation."

RESPONSE 12:

Capacity certifications reflect the total as-built capacity. This maximum volume does not change, unless modifications are made to the RCS. Sludge accumulations, on the other hand, fluctuate, just as the wastewater levels fluctuate. Sludge accumulations are required to be monitored and recorded in the PPP, as necessary, but at least annually beginning in year three of the permit and then annually thereafter.

COMMENT 13:

The City comments that the draft permit should include a specific list of circumstances that would qualify for granting extensions to the RCS compliance schedule.

RESPONSE 13:

The conditions that may delay construction of a RCS are numerous and highly variable. The extension request must provide an explanation of the conditions that prevented construction during the specified timeframe. The ED will evaluate the specific reasons to determine if an extension should be granted.

COMMENT 14:

The City comments that according to the submitted liner certification for the RCS, the certification was based on samples taken in the bottom of the RCS. Since samples were not taken in the embankments, the embankments may not meet the criteria at all, and there is no data to support a finding that there will not be leakage from the RCS. Before the permit is issued, proper certification should be performed verifying that both the embankments and bottom of the RCS meet criteria.

RESPONSE 14:

The liner certification for RCS #1 was completed in July 2000. The rules in place at that time did not require the sample locations to be identified. Neither the rules nor the current permit, issued December 13, 1999, require a minimum number of samples or sample locations. The ED

determined that the liner certification for RCS #1 met the applicable rule requirements at the time of certification.

COMMENT 15:

The City recommends that in addition to the compaction testing requirement at Section VII.A.3(f)(4) of the draft permit that TCEQ should also require the following: 1) requiring the field density tests be based on predetermined moisture density compaction curves, 2) defining the frequency of testing, 3) requiring compaction testing on each lift during construction of the liner, 4) requiring documentation of compaction test locations and results provided to TCEQ, and 5) requiring continuous on-site inspection during construction.

RESPONSE 15:

Section VII.A.3(b) of the permit requires that the RCS be designed and constructed in accordance with the technical standards developed by NRCS, ASABE, ASCE, or ASTM. Additionally the permit identifies specific RCS design, construction, and testing criteria in Section VII.A.3. The construction and testing requirements for embankment lifts are in Section VII.A.3.(f)(2) and are as follows:

Embankment Lifts. The embankment shall be constructed in lifts or layers no more than eight (8) inches compressed to six (6) inches thick at a minimum compaction effort of 95 percent (%) Standard Proctor Density (ASTM D698) at -1% to +3% of optimum moisture content.

The compaction testing requirements are in Section VII.A.3.(f)(4) and are as follows:

Compaction Testing. Embankment construction must be accompanied by certified compaction tests including in place density and moisture in accordance with ASTM D 1556, D 2167 or D 2937 for density and D 2216, D 4643, D 4944 or D 4959 for moisture, or D 6938 for moisture and density. Compaction tests will provide support for the liner certification performed by a licensed Texas professional engineer as meeting a permeability no greater than 1×10^{-7} centimeters per second (cm/sec) over a thickness of 18 inches or its equivalency in other materials.

More specific liner requirements are included in Section VII.A.3(g) of the permit. The liner must be designed by a licensed Texas professional engineer and documented to have hydraulic conductivities no greater than 1×10^{-7} cm/sec in accordance with ASTM D 5084, or other method approved by the ED, with a thickness of 18 inches or greater or its equivalency in other materials, and not to exceed a specific discharge through the liner of 1.1×10^{-6} cm/sec with a water level at spillway depth.

COMMENT 16:

The City comments that the permit application does not provide an adequate description of the structural controls, particularly the berms and ditches.

RESPONSE 16:

A Runoff Control Map was submitted by the Applicant that clearly identifies the control features directing run-off. This map shows a thick dashed line identified as the berm.

The permit only authorizes discharges from a properly designed, constructed, operated, and maintained RCS in the event of chronic or catastrophic rainfall events or catastrophic conditions that cause an overflow. Discharges are not authorized under any circumstances from diversion structures.

The permit requires the Applicant to conduct weekly inspections on all control facilities, including the RCS, stormwater diversion devices, runoff diversion structures, control devices for management of potential pollutant sources, and devices channeling contaminated stormwater to the RCS; and to annually conduct a complete site inspection of the production area. Additionally, the draft permit requires the Applicant to have a licensed Texas professional engineer complete a site evaluation of the structural controls every five years.

COMMENT 17:

The City comments that the Applicant has failed to demonstrate the adequacy of its dewatering capability and it asks the ED to verify the dewatering capabilities of the equipment listed in the application.

RESPONSE 17:

TCEQ rules do not require ED review or approval of the equipment an applicant will use to dewater the RCS. The draft permit requires that the Applicant ensure that the irrigation system design is capable of removing wastewater from the RCS on a regular schedule. Equipment capable of dewatering the RCS must be available and operational whenever needed to restore the operating capacity required by the RCS management plan. This gives the Applicant flexibility on the type of equipment to be used at the time of dewatering.

COMMENT 18:

The City comments that the draft permit does not require the annual facility inspection report or five year evaluation to be sent to TCEQ as required by 30 TAC §§ 321.46(c)(2) and (e)(2). The City states that submission to TCEQ should be required by the draft permit and not just maintained in the PPP.

RESPONSE 18:

The rules cited by the City do not require these records be submitted to TCEQ. However, 30 TAC § 321.46(d) requires that these records be maintained on site for a minimum of five years from the date the record was created and submitted to the Commission within five days upon written request by the ED. These records should be maintained in the PPP where they are subject to review during site inspections conducted by TCEQ field staff. Failure to conduct an annual site inspection or the five year evaluation; and to document the findings of both in the PPP or failure to correct the deficiencies identified would be a violation of the permit and rules subjecting the Applicant to potential enforcement action by the Commission.

COMMENT 19:

The City comments that the draft permit should be amended to require that an engineer certify to the adequacy of structural controls in the five year evaluation prior to issuance of the permit or immediately after the issuance of the permit. Additionally, the City comments that the Applicant should be required to provide a current certification of structural controls before the draft permit is issued.

RESPONSE 19:

The draft permit will require a licensed Texas professional engineer to review the existing engineering documentation, complete a site evaluation of the structural controls, review existing liner and RCS capacity documentation, and complete and certify a report of their findings. The site evaluation would be a comparison of what is required by the engineering documentation and the actual structural controls, as constructed, operated, and maintained. Should the engineer determine that the structural controls are inadequate with respect to the design requirements in the engineering documentation, those findings would be included in the certified report. Licensed Texas professional engineers are subject to standards of performance as established by the Texas Board of Professional Engineers. These permit provisions become effective upon issuance of the draft permit.

The issuance of the permit will implement the requirement to conduct the five year evaluation once every five years. Thus the Applicant will be required to conduct the evaluation within five years of permit issuance, then every five years thereafter.

The permit only authorizes discharges from a properly designed, constructed, operated, and maintained RCS in the event of chronic or catastrophic rainfall events, or catastrophic conditions that cause an overflow. Discharges are not authorized under any circumstances from diversion structures.

The permit requires the Applicant to conduct weekly inspections on all control facilities, including the RCS, stormwater diversion devices, runoff diversion structures, control devices for management of potential pollutant sources, and devices channeling contaminated stormwater to the RCS; and to annually conduct a complete site inspection of the production area. Additionally, the permit requires the Applicant to have a licensed Texas professional engineer complete a site evaluation of the structural controls every five years.

COMMENT 20:

The City comments that the draft permit fails to require adequate sampling of wastewater and manure, with respect to sample collection and frequency, and the approximate locations or time of year that soil tests will be taken.

RESPONSE 20:

The permit provisions for sampling and monitoring are consistent with 30 TAC § 321.36(e) and (g); and with the requirements of NRCS Practice Standard Code 590. The draft permit requires that representative samples be collected annually for manure, wastewater, and soils. The results of the analyses must be used in determining application rates. Because they are used in determining application rates, the sample collection should be representative of the material, as applied. If manure and wastewater samples are not representative of the materials, as applied,

the following year's soil analyses may be higher than expected. This in turn would result in a reduced application rate.

NRCS Practice Standard Code 590 requires the approximate locations where soil tests will be taken and the timing and frequency of soil sampling. Page 7 of the NMP, in the permit application, states the location as "each field" and frequency as "annually." These statements comply with 30 TAC § 321.36(g) and Section VII.A.9.(b) of the draft permit.

COMMENT 21:

The City comments that the manure production tables in the application indicate that the total phosphorus produced by the proposed 1,800 cows is 163 lb/day P₂O₅. This is equivalent to 59,495 lb/yr P₂O₅. The NMP indicates that the amount of phosphorus to be applied to the LMUs or third-party fields is only 23,125 lb/yr P₂O₅. So, the Applicant does not account for 36,470 lb/yr P₂O₅ or 61.3% of the phosphorus generated.

RESPONSE 21:

The permit application identifies how much phosphorus is generated and the methods used to utilize or dispose of it. It is projected that 1,800 cows will generate 163 lbs of phosphorus per day. The calculation is based on a book value for phosphorus production by dairy cows developed by the American Society of Agricultural and Biological Engineers. It is part of a set of data intended for use in designing facilities to accommodate actual waste production. As long as the phosphorus being land applied or hauled-out is accounted for as required under TCEQ rules, an accounting to reflect what remains in the CAFO production area is not necessary.

COMMENT 22:

The City notes that the draft permit allows the Applicant to apply up to 100% of the phosphorus within the watershed. The City recommends that the draft permit be revised to require that up to 50% of the waste generated by the proposed operation be managed outside of the North Bosque watershed in a manner that is consistent with the goals of the applicable TMDL.

RESPONSE 22:

The North Bosque TMDL has a goal of a 50% reduction in instream loading. The TMDL and TMDL I-Plan address growth of CAFOs through BMPs designed to decrease instream loading. Neither the TCEQ rules nor the TMDL I-Plan requires a 50% haul-out of collectible manure.

COMMENT 23:

The City comments that multiple NMP's have been submitted and that the draft permit should state the date of the most recent NMP that the facility will operate under for the year following permit issuance.

RESPONSE 23:

In response to comment the date of the most recent NMP has been added to Section V of the Fact Sheet.

COMMENT 24:

The City comments that the Applicant should be required to submit to TCEQ the actual annual yields of harvested crops for both LMUs and third party fields to demonstrate that reasonable crop yields are being used. Alternatively, Waco requests that Section VII.8(e)(5)(iv) be revised to clarify the methods that TCEQ will employ to determine compliance in the absence of any annual harvested yield reporting.

RESPONSE 24:

Section VIII.A.4 requires the Applicant to update records annually to include actual annual yield of each harvested crop for each LMU. The information is available to the ED during field investigations. Crop removal rates are based on yields when the NMP software is used.

The draft permit allows the Applicant to provide wastewater, sludge and/or manure to third-party fields. The third party field operators must adhere to the contract requirements outlined in the draft permit, which include land application at an agronomic rate based on soil test phosphorus. The draft permit establishes a three tiered approach to application rates on third-party fields. The proposed crop and yield goal are used by the third-party operator to determine the application rates. In the event that the yield goal is not achieved, the soil test results will be higher than expected. If soil test results reach 200 ppm, the Applicant cannot provide wastewater, sludge and/or manure to that third-party field operator. Based on these requirements, the ED disagrees that submitting crops and yields on third-party fields is necessary.

COMMENT 25:

The City comments that NMP does not account for the nutrients available to plants in the root zone to satisfy the crop requirement. The City comments that the NMP should be revised to allow application of only that quantity of nutrients that will benefit optimum crop production.

RESPONSE 25:

NMPs are developed in accordance with NRCS Practice Standard Code 590. NMPs evaluate nutrients in the soil as part of the Phosphorus Risk Index. The allowable application rate, as determined by the NMP, takes both risk factors and soil phosphorus levels into account.

COMMENT 26:

The City comments that the draft permit allows land application on land exceeding 200 ppm of phosphorus. The North Bosque River TMDL Implementation Plan (“TMDL I-Plan”), dated December 2002 (p.16), provides that formal enforcement action will result if CAFOs “apply waste or wastewater to a WAF that has been documented to have exceeded 200 parts per million phosphorus in Zone 1 of the soil horizon.” Section VII.A.8(c)(2) of the draft permit appears to be inconsistent with the TMDL I-Plan. Dr. Smith is concerned about the impact to water quality downstream of the CAFO, and how the water quality will impact the existing uses of the receiving stream. Dr. Smith is concerned that the permit may not adequately control contamination from increased Phosphorus in the receiving waters.

RESPONSE 26:

The draft permit requirements are consistent with TCEQ rules relative to phosphorus reduction in waste application fields. The use of phosphorus based assessments requires action on fields exceeding 200 ppm. All waste application is limited under the permit provisions to avoid significantly increasing phosphorus runoff into the North Bosque River. An LMU that reaches 200 ppm of phosphorus triggers the NUP requirement. See 30 TAC § 321.40(k)(3) and Section VII.A.8(c) of the draft permit. A NUP must be approved by the ED prior to land application of any additional manure, sludge, or wastewater to the LMU. For third party fields, there is no NUP requirement, but land application of all manure, sludge, or wastewater must cease when a field reaches a phosphorus level of 200 ppm or higher.

The table below illustrates numbers from the Applicant's NMP to compare the maximum application rate versus the proposed application rate. The plan is based on a goal of maintaining soil test phosphorus levels below 200 ppm, which results in a planned application amount that is less than the maximum allowed under the East Texas Phosphorus Index (application on all LMUs, collectively). NMPs are routinely updated and the values shown below are subject to change.

LMU #	Soil Test P (ppm)	Max Annual P ₂ O ₅ (lbs/ac)	Proposed Annual P ₂ O ₅ (lbs/ac)	% of Max Allowable
1	10	219	<1	0.1
2	21	265	244	99

Page 16 of the TMDL I-Plan for the North Bosque does read as indicated by Waco. However, immediately following this statement the document states that more information is available in the section entitled "Enforcement Program." In that section of the TMDL I-Plan, it states that owners of facilities would be subject to enforcement if they performed land application on fields where soil phosphorus exceeded 200 ppm, unless land application was done according to an approved NUP.¹ This is consistent with TCEQ rules that require an approved NUP prior to any additional land application on LMUs that exceed 200 ppm of phosphorus and prohibit land application on third party fields that exceed that amount.

COMMENT 27:

Waco comments that the draft permit should be revised to prohibit waste application onto non-cultivated fields. At minimum, Waco encourages TCEQ to prohibit application of manure on non-cultivated fields within 500 feet of a stream. In addition, Waco comments that a specific permit provision be added to require adherence to NRCS Code 590 on third party fields if it is more restrictive and that TCEQ should require NMPs for third party fields.

RESPONSE 27:

The ED declines to make the requested change because the CAFO rules do not require that land application on third party fields be consistent with the NRCS Practice Code 590. However, the limitations placed in the draft permit assure that application on third party fields will take into

¹ See "An Implementation Plan for Soluble Reactive Phosphorus in the North Bosque Watershed," December, 2002, page 39:

account the potential for phosphorus build-up to occur. Land application on third party fields may not exceed a maximum of 200 ppm of phosphorus. When a third party fields tests 200 ppm or higher for phosphorus, all land application on that field must cease.

The application limitations on third party fields are based on soil test phosphorus levels instead of the Phosphorus Risk Index. The restrictions are more conservative than the rules require. Similar to an NMP, as soil phosphorus levels increase on third party fields, the Applicant will have to reduce waste application rates in order to continue land applying on those fields and to prevent those fields from exceeding 200 ppm of phosphorus.

Section VII.A.8(e)(5) provides the requirements for third-party fields. These provisions apply to cultivated and non-cultivated fields, with the exception of (5)(i)(B), which is specific to non-cultivated fields. Cultivated fields are fields used for row cropping that require the ground to be tilled, disced, or plowed to prepare for seed planting, such as corn, wheat, and oats. Non-cultivated fields are used to grow plants that do not require the ground to be tilled, disced, or plowed, such as Bermuda grass or native grasses. If the requirement in (5)(i)(B) to incorporate manure and sludge was applied to non-cultivated fields, the vegetation would be significantly damaged, thus reducing the yield goal and nutrient uptake. The ED finds that the permit has adequate provisions related to land application on both cultivated and non-cultivated third-party fields.

Section VII.A.8(e)(5)(i)(A) of the permit requires that land application to third-party fields be conducted in accordance with the applicable requirements in 30 TAC § 321.36 and § 321.40. 30 TAC § 321.40(h) requires that “vegetative buffer strips shall be no less than 100 feet of vegetation to be maintained between manure, litter, or wastewater application areas and water in the state. The CAFO operator shall maintain the buffer strips in accordance with NRCS guidelines.

COMMENT 28:

The City comments that draft permit provision VII.A.7(e)(5) allows sludge to be applied to third-party fields. The City states that this provision appears to be inconsistent with 30 TAC § 321.42(j), which allows only manure, litter, and wastewater to be applied to third-party fields.

RESPONSE 28:

30 TAC § 321.32(49) defines sludge as solid, semi-solid, or slurry waste generated during the treatment of and/or storage of any wastewater. The term includes materials resulting from treatment, coagulation, or sedimentation of waste in a retention control structure. Waste is defined as manure (feces and urine), litter, bedding, or feedwaste from animal feeding operations. Therefore permit requirements applicable to manure are inclusive of sludge, except as noted in the permit.

Appropriate utilization of the nutrients is tied to the BMPs used and is not based on nutrient source. These BMPs include, but are not limited to, land application at agronomic rates and hydrologic needs of the crop, adherence to buffers between land application areas and water in

the state, and the prohibition of discharges from land application areas. Land application on third party fields is not only limited to agronomic rates, but is further limited by soil test phosphorus ranges. For example, land application rates may not exceed the crop nitrogen requirement when soil phosphorus concentration in Zone 1 is less than or equal to 50 ppm phosphorus. Ultimately, land application on third party fields is prohibited once the soil test phosphorus level is equal to or greater than 200 ppm.

COMMENT 29:

The City comments that the draft permit fails to require a demonstration of sustainability for the term of the permit.

RESPONSE 29:

30 TAC § 321.36(d)(2) and Section VII.A.7(a) of the draft permit requires the operator to create and maintain a site-specific NMP along with documentation regarding implementation of the plan. This section also requires annual sampling and the NMP must be updated to modify application amounts based on soil testing and wastewater and manure testing. A five-year NMP would be impracticable because the NMP is likely to change yearly due to changing climatic and operational conditions; and soil sampling results. It is important that NMPs remain flexible. When the NMP is updated, the new version should be kept in the PPP documentation and available to TCEQ personnel during field investigations.

Long term sustainability of a field may be a planning consideration, but there are no rule requirements that LMUs be sustainable for the permit term.

COMMENT 30:

The City comments that the draft permit fails to provide a meaningful definition of vegetative buffers. The City recommends adding the following sentence to Section X.D.: A vegetative buffer shall meet the criteria of Riparian Forest Buffers defined by NRCS Practice Code 391 or the criteria of Vegetative Filter Strips as defined by NRCS Practice Code 393.

RESPONSE 30:

30 TAC § 321.40(h) requires that “vegetative buffer strips shall be no less than 100 feet of vegetation to be maintained between manure, litter, or wastewater application areas and water in the state. Although not defined by TCEQ rules, vegetative buffers are commonly understood to mean vegetation that reduces shock due to contact. NRCS Practice Code 393 refers to Practice Code 391, *Riparian Forest Buffer*. Riparian forest buffers are areas predominantly in trees or shrubs located adjacent to and up-gradient from watercourses or water bodies. One of the purposes of a riparian forest buffer is to reduce excess amounts of sediments, organic material, nutrients, and pesticides in surface runoff. This purpose is the same as that performed by vegetative filter strips according to NRCS Practice Code 393. Citing the practice code is adequate for permit requirements. The practice standard has an adequate definition and the ED made no change in response to the comment.

COMMENT 31:

The City comments that the draft permit fails to clearly define the measurement of the vegetative buffers and filter strips, in relation to the stream, e.g., from the banks of the stream and not the centerline of the stream.

RESPONSE 31:

The ED agrees that the measurement of the vegetative buffers and filter strips should be done from the banks of a stream, not from the center of the stream. Filter strips,² vegetative buffers, and riparian forest buffers are, by definition, vegetated strip flow lengths. These vegetated strips can only exist as close as the normal water line or at the top of the bank.³ Because the Applicant has to maintain the distance from where the vegetation can be established, no definition is needed. Field marking of land application areas is not required by the regulations. The ED does not believe this definition needs to be added to the permit. It is logical that the appropriate set back distance can only be measured from the land surface not from the center of the stream.

COMMENT 32:

The City comments that appropriate provisions for containment from silage, commodity, and hay storage areas should be part of the application to determine if containment provisions are adequate.

RESPONSE 32:

Section X.I. of the draft permit requires that all runoff from silage, commodity, and hay storage outside the RCS drainage area will be contained and that appropriate provisions for that containment be stated in the PPP upon issuance of the permit. The draft permit does not authorize any discharge from the silage, commodity, or hay storage areas located outside the drainage area of the RCS. The ED believes these permit provisions are sufficient to reduce and/or prevent impacts to water quality from these areas.

COMMENT 33:

The City comments that the draft permit should be amended to include additional provisions that address control of pathogens. Dr. Smith is concerned that the permit may not adequately control contamination from pathogens and bacteria. Dr. Smith is concerned that pathogens and algal blooms will negatively affect his health and the health of his family.

RESPONSE 33:

40 CFR § 122.44(k)(3) allows states to use BMPs to control or abate discharges “when numeric effluent limitations are infeasible.” This also applies to bacteria. In the case of North Bosque dairies, they are only authorized to discharge in the event of a chronic or catastrophic rainfall event that exceeds the 25-year, 10-day storm event. Since discharges are not allowed except in the event of a chronic or catastrophic rainfall, there are no bacteria discharged from the control facilities except during chronic or catastrophic rainfall events. If such an event occurs, the

² Filter strips are an area of herbaceous vegetation.

³ Per Practice Standard Code 391.

amount of rainfall involved and any resulting discharge will be highly variable both in volume and concentration of waste. Discharges from chronic or catastrophic rainfall events are not comparable to the continuous discharges from municipal wastewater treatment plants or industrial facilities. A discharge during chronic or catastrophic rainfall events is authorized by EPA and TCEQ rules. The BMPs in place to limit the amount on nutrients applied to the LMUs also limit the amount of bacteria that can be applied. Therefore, bacteria applied to LMUs are limited by the BMPs that limit nutrient application.

The requirements in the draft permit satisfy this requirement because the North Bosque River TMDLs are intended to achieve significant reductions in the annual average concentrations and total annual loading of soluble phosphorus in the river. The TMDLs are designed to do this by focusing on controlling soluble phosphorus loading and in-stream concentrations to protect designated uses. The management measures for controlling phosphorus loading will also have some corollary effect on reducing pathogen and bacteria loading, since non-point source nutrient and pathogen loads largely originate from the same sites and materials; and are transported via the same processes and pathways. Other provisions in the rules and draft permit directed at reducing and minimizing all pollutants, including pathogens and bacteria, that are potential constituents of animal wastes include:

1. Requiring a larger RCS with capacity to contain a designed 25-year, 10-day rainfall event (approximately 60% larger than required to contain the 25-year, 24-hour rainfall event);
2. Establishing an RCS management plan;
3. Controlling runoff from manure piles by covering, berming, or requiring that they drain into an RCS;
4. Setting additional minimum buffer distances between land application units and surface water in the state;
5. Prohibiting nighttime land application between 12 a.m. and 4 a.m.; and
6. Requiring a NMP that uses phosphorus transport considerations to determine allowable applications of nutrients. The phosphorus index approach reduces allowable application of nutrients to levels that are appropriate for reducing and minimizing all pollutants that are constituents of animal wastes.

COMMENT 34:

The City comments that this CAFO has a history of not complying with its permit and the rules. The City states that it failed to construct an RCS with the capacity required by its existing permit, it failed to submit an engineering certification of structural controls, and it failed to submit an engineering certification of RCS capacity within 90 days of completion. The City states that great care should be taken in ensuring that the Applicant is capable of meeting its obligations of the draft permit before the TCEQ grants it any such authority.

RESPONSE 34:

During the technical review, a compliance history review of the Applicant and the site is conducted based on the criteria in 30 TAC, Chapter 60. The compliance history for the Applicant and site is reviewed for the five-year period prior to the date the permit application

was received by the ED. The compliance history includes multimedia compliance-related components about the site under review. These components include the following: enforcement orders, consent decrees, court judgments, criminal convictions, chronic excessive emissions events, investigations, notices of violations, audits and violations disclosed under the Audit Act, environmental management systems, voluntary on-site compliance assessments, voluntary pollution reduction programs and early compliance. The Applicant has a site compliance history classification of "average" and a numerical site rating of 9.23 as of September 1, 2008. The ED determined that it is not necessary to add special provisions to the draft permit to address compliance issues.

Changes made in response to comment

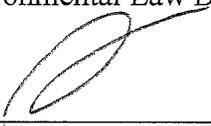
NMP date added to the Fact Sheet.

Respectfully submitted,

Texas Commission on Environmental Quality

Mark R. Vickery, P.G.
Executive Director

Robert Martinez, Director
Environmental Law Division

By 
Alicia M. Lee, Staff Attorney
Environmental Law Division
State Bar No. 24032665
P.O. Box 13087, MC 173
Austin, Texas 78711-3087
(512) 239-0600
(512) 239-0606

REPRESENTING THE
EXECUTIVE DIRECTOR OF THE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY